

## VCD-ON-DEMAND SYSTEM AND METHOD

### ABSTRACT

1 The disclosed technology is called VCD on demand. In a typical system, the EDA tool  
2 incorporating the VCD on-demand technology has the following high level attributes: (1) RCC-  
3 based parallel simulation history compression and recording, (2) RCC-based parallel simulation  
4 history decompression and VCD file generation, and (3) On-demand software regeneration for a  
5 selected simulation target range and design review without simulation rerun. Each of these  
6 attributes will be discussed in greater detail below. When the user selects a simulation session  
7 range, the RCC System records a highly compressed version of the primary inputs from the test  
8 bench process. The user then selects a narrower region, called the simulation target range, within  
9 the simulation session range for a more focused analysis. The RCC System dumps the hardware  
10 state information (i.e., primary outputs) of the hardware model into a VCD file. The RCC System  
11 then allows the user to proceed directly to view the VCD file from the beginning of the simulation  
12 target range without having to rerun the entire simulation from the very beginning of the simulation  
13 session range.